

FIG. 1 is a perspective view of the apparatus of the present invention, showing the base, the support, the arm, the handle, and the foot, and the various parts thereof.

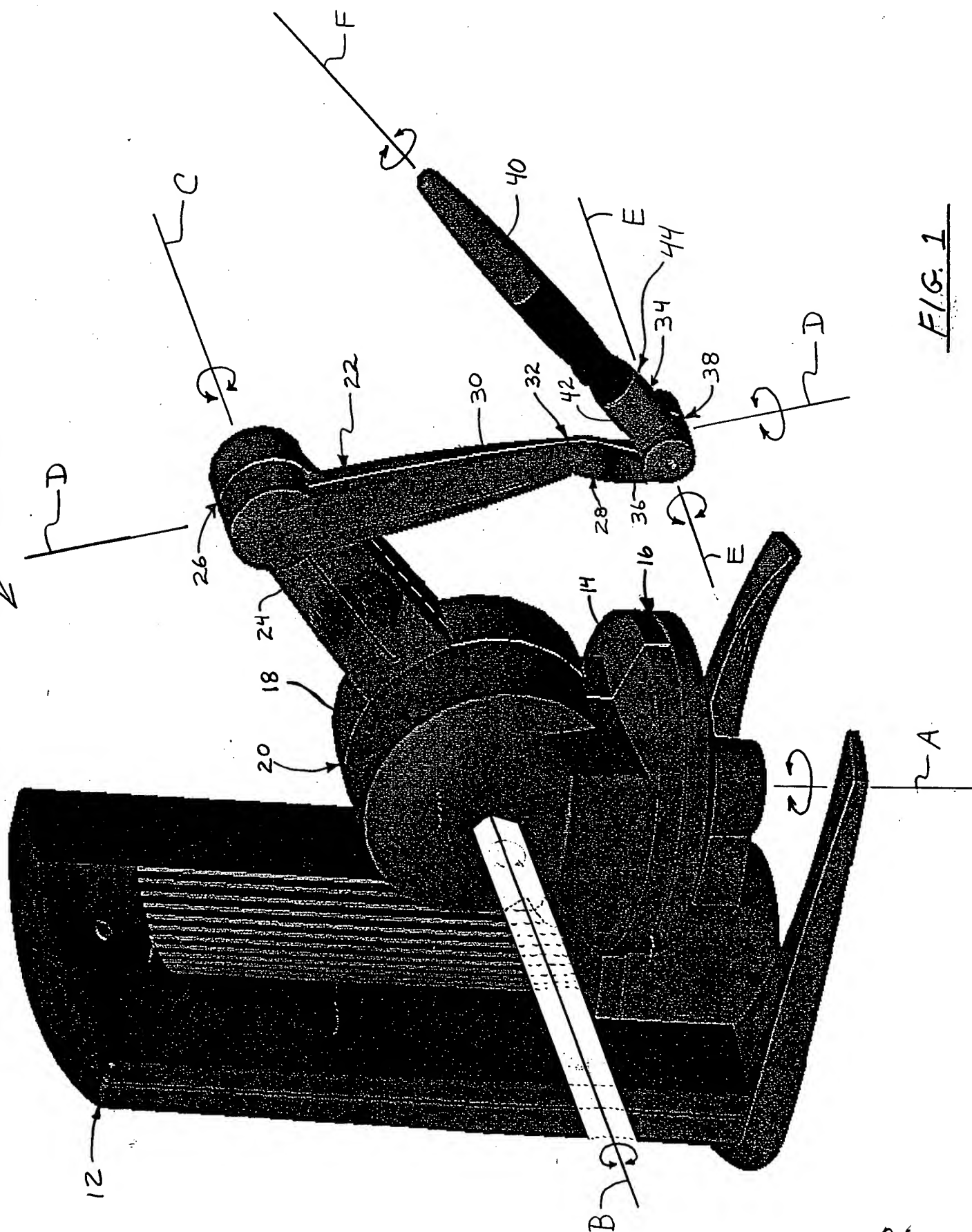


FIG. 1

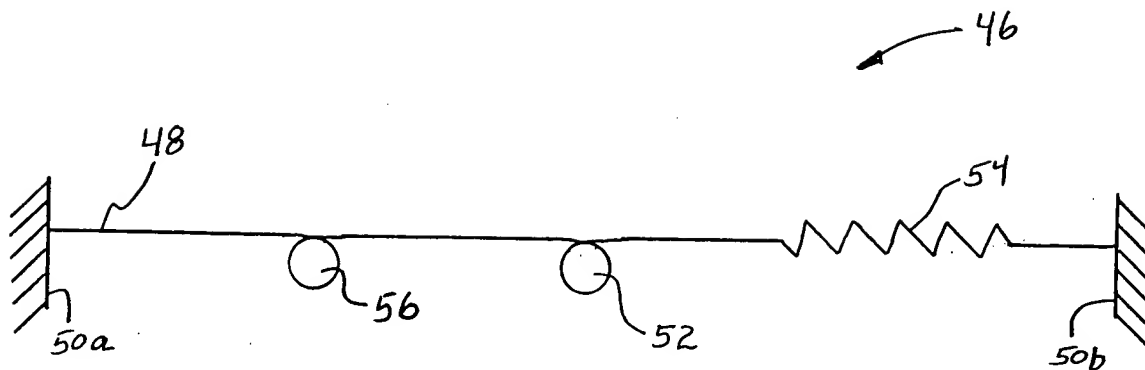


FIG. 2A

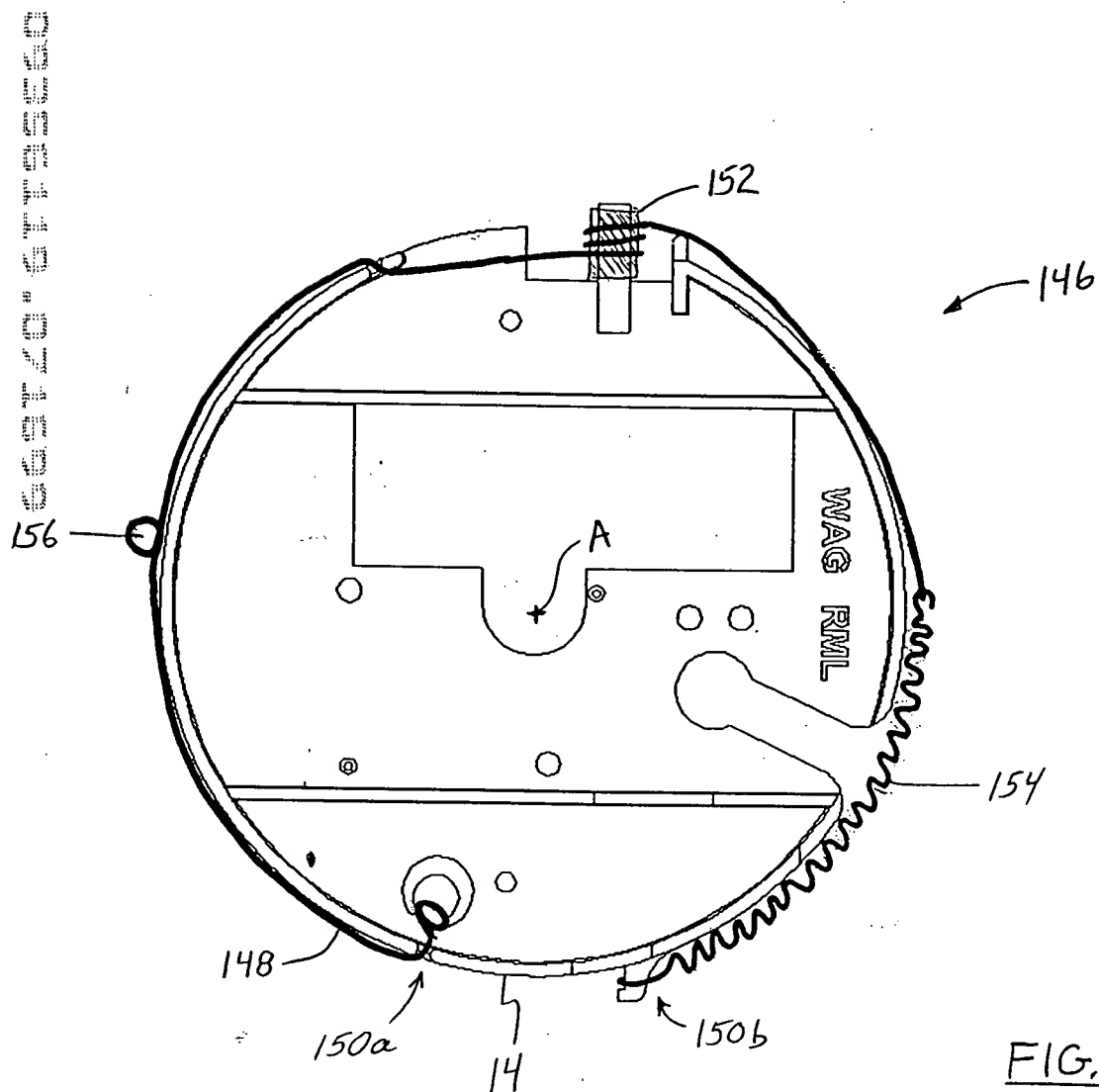


FIG. 2B

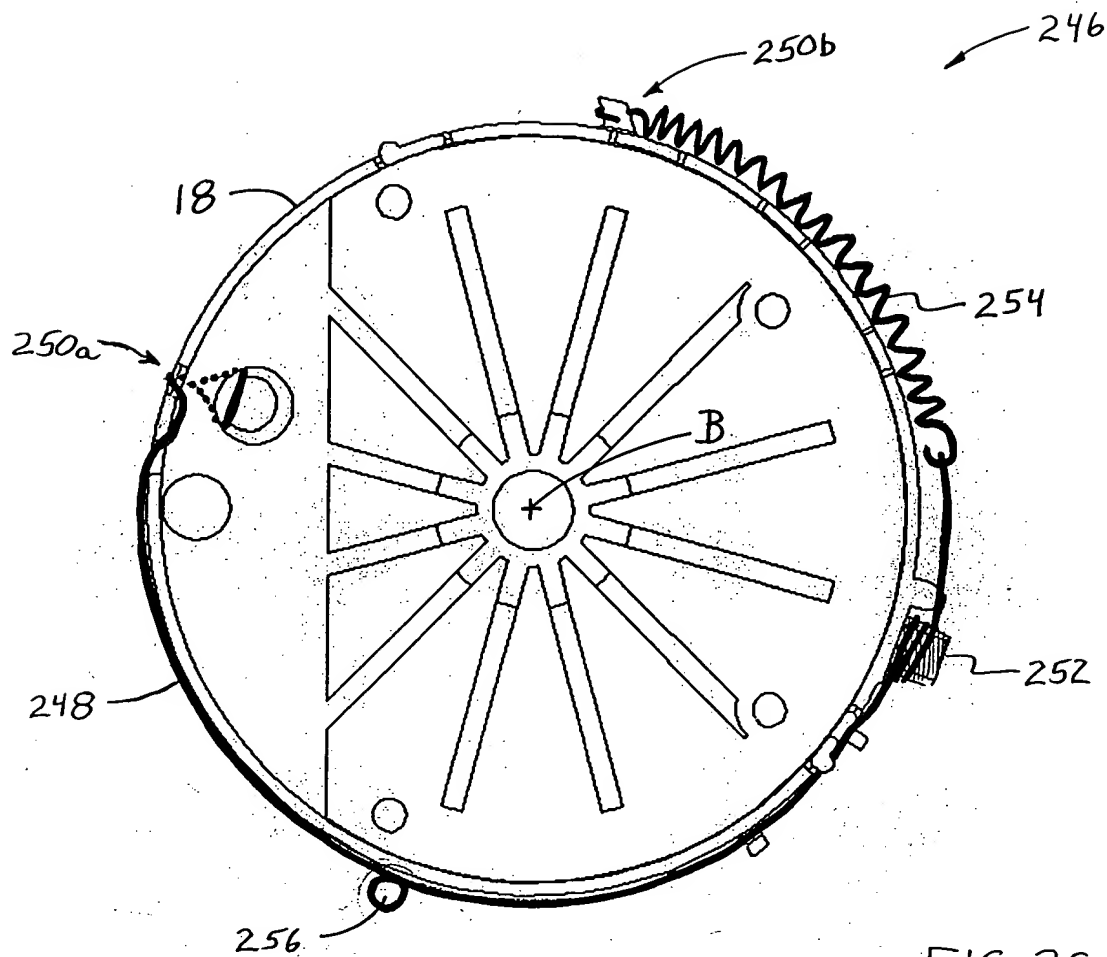


FIG. 2C

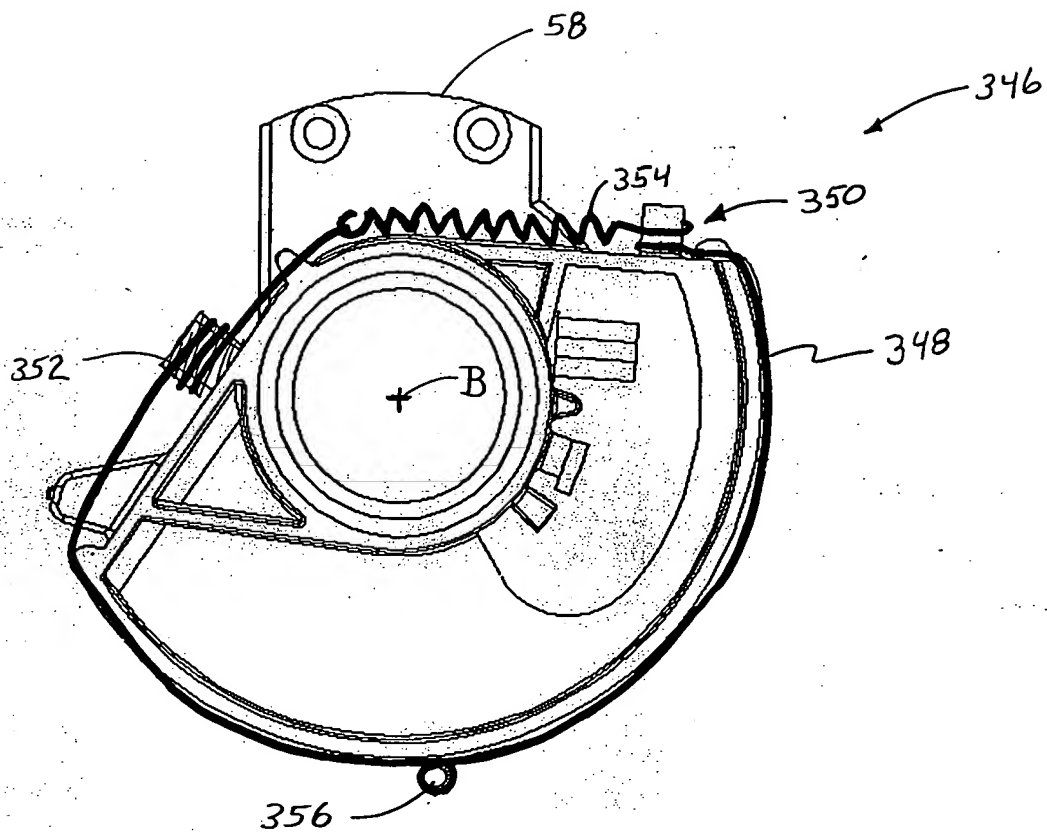


FIG. 2D

00356119 071699

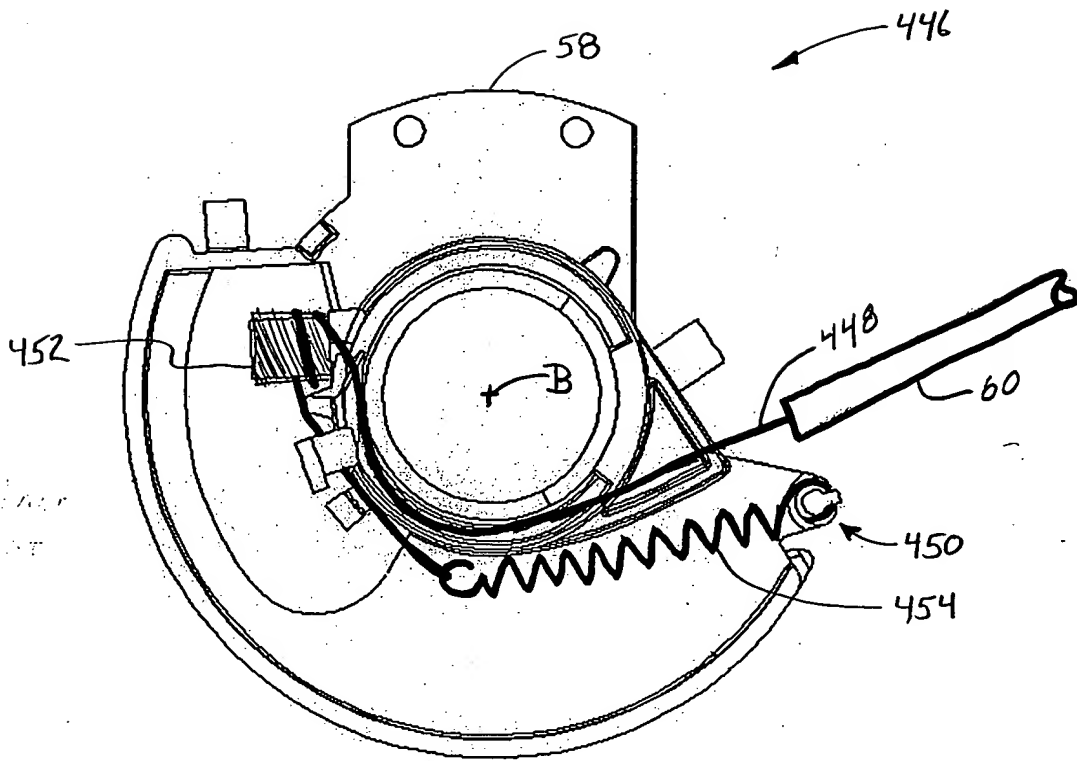


FIG. 2E

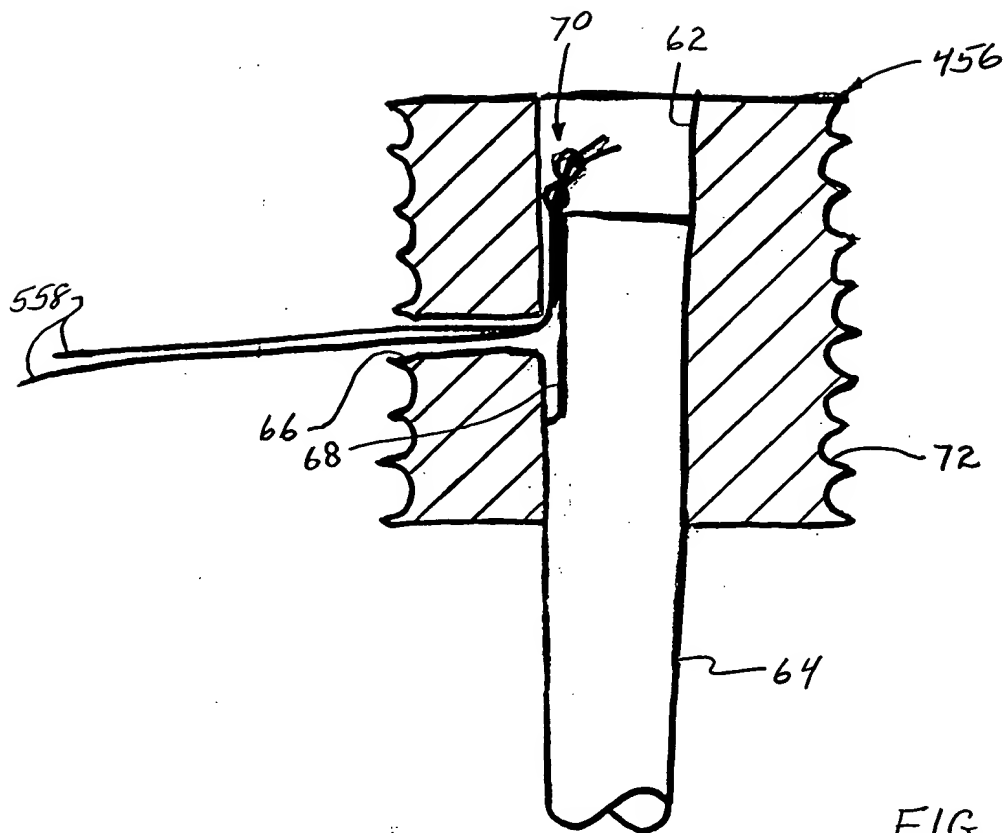


FIG. 3A

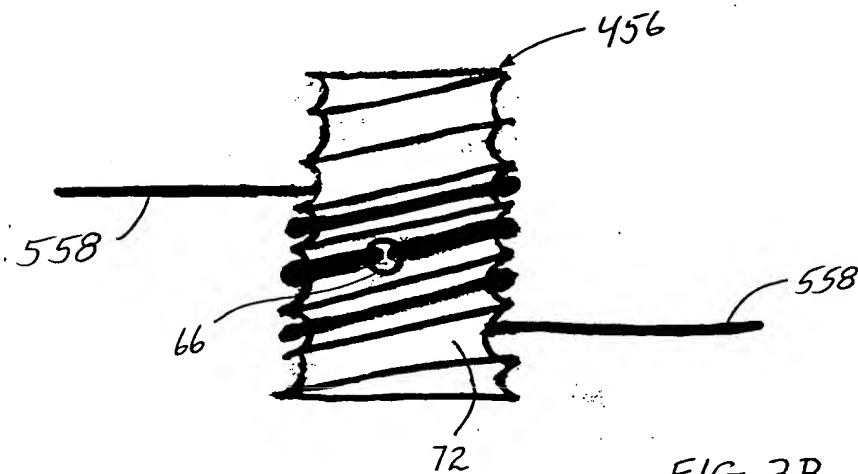


FIG. 3B

FIG. 4A

FIG. 4A

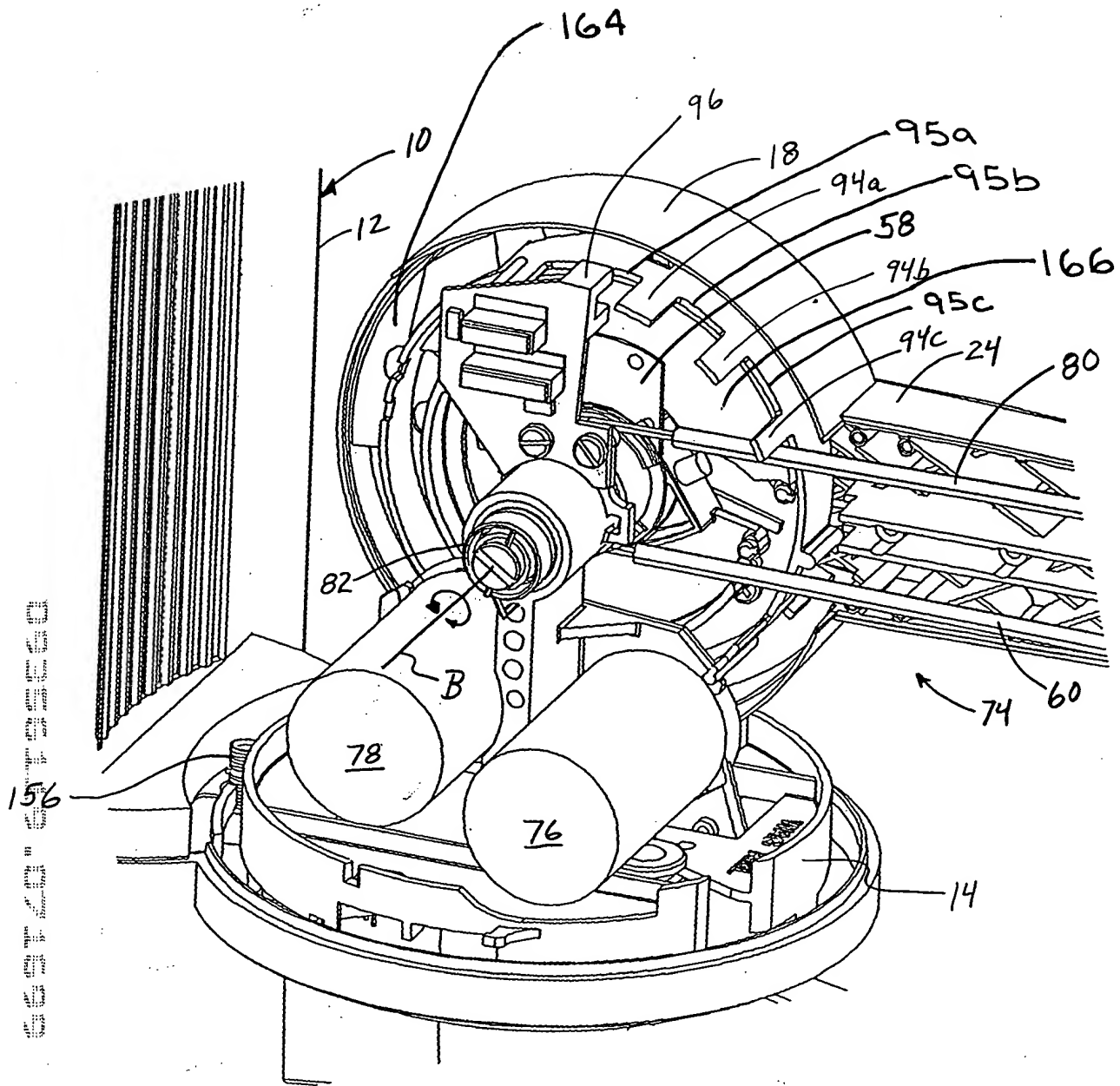


FIG. 4B

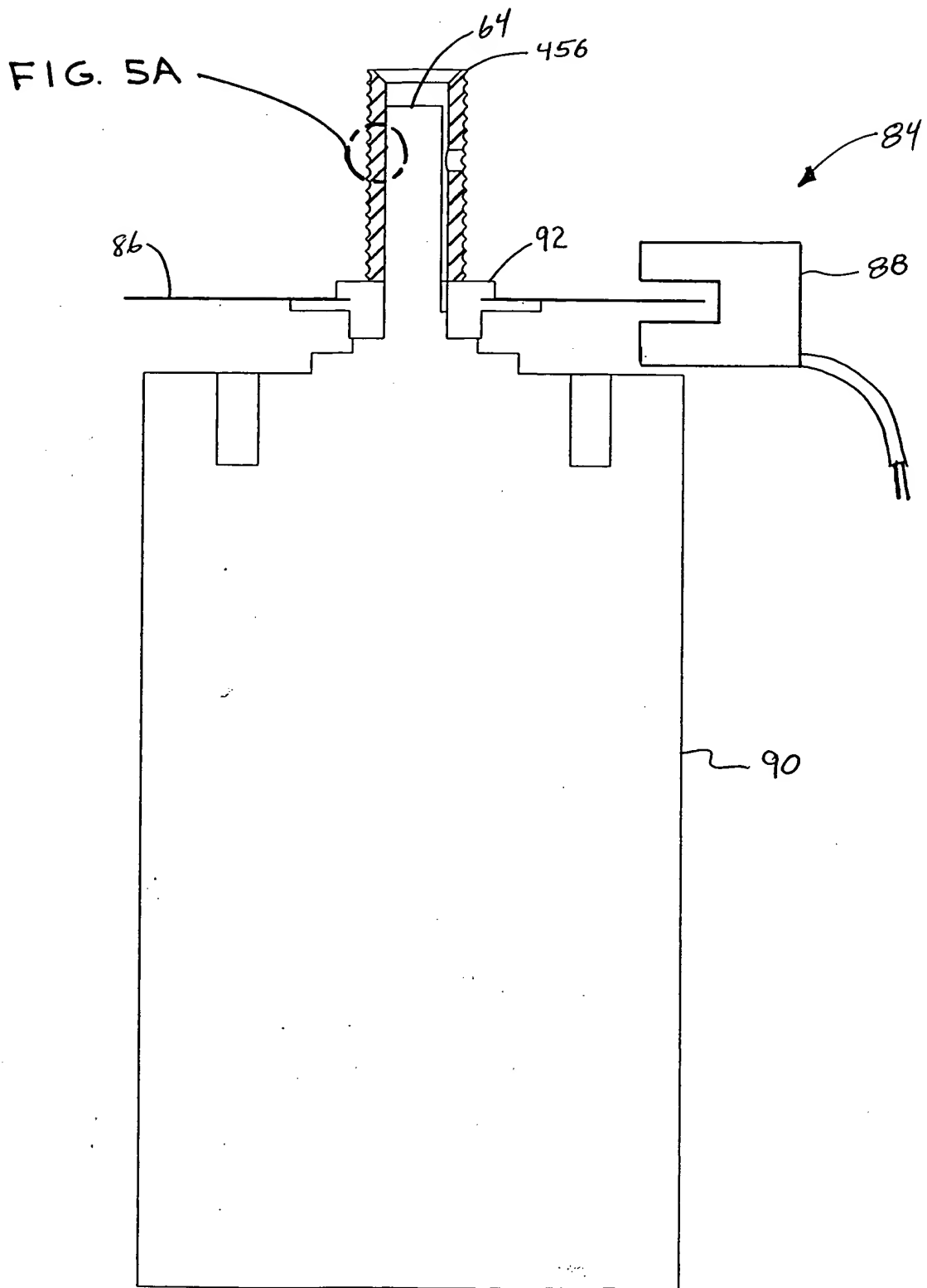


FIG. 5

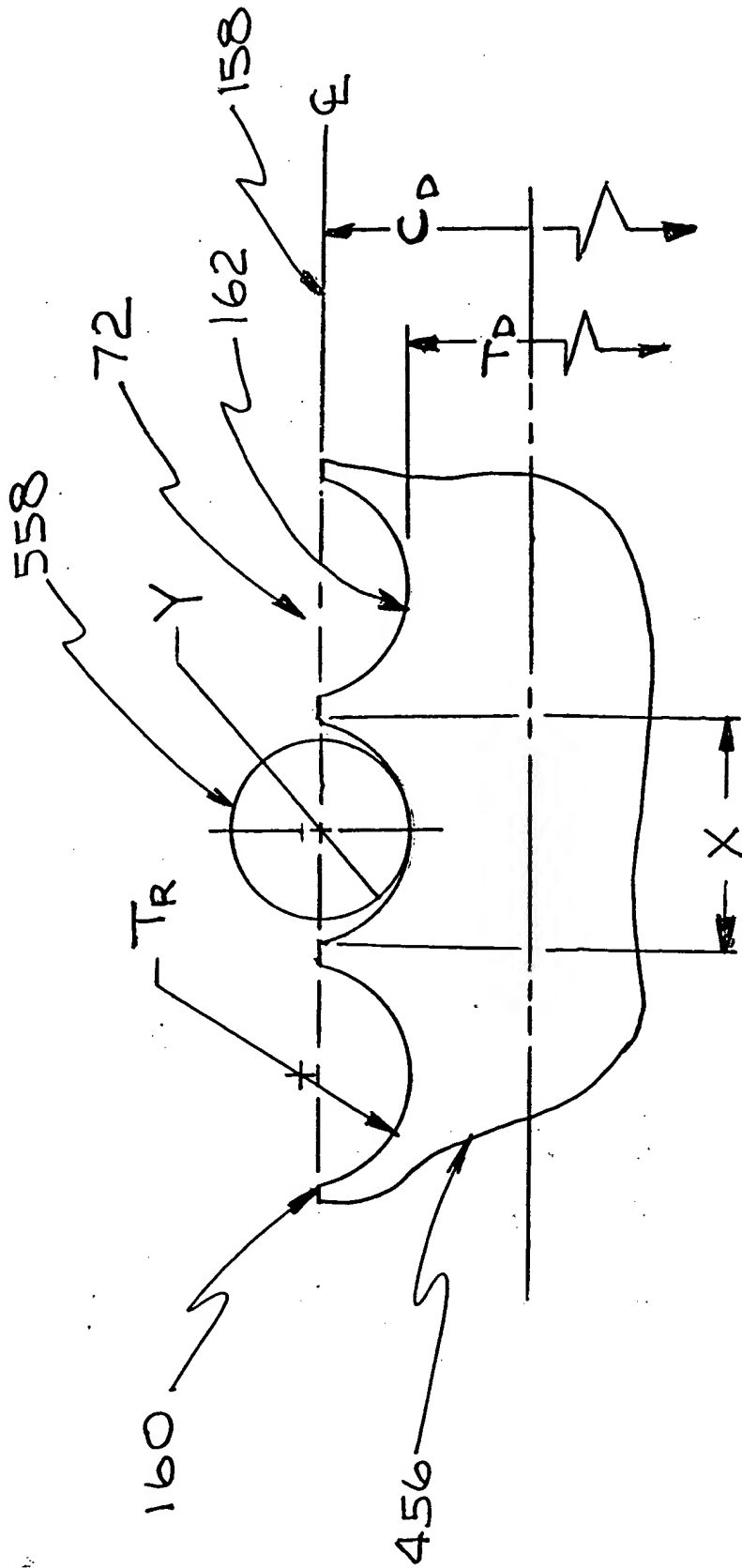


FIG. 5A

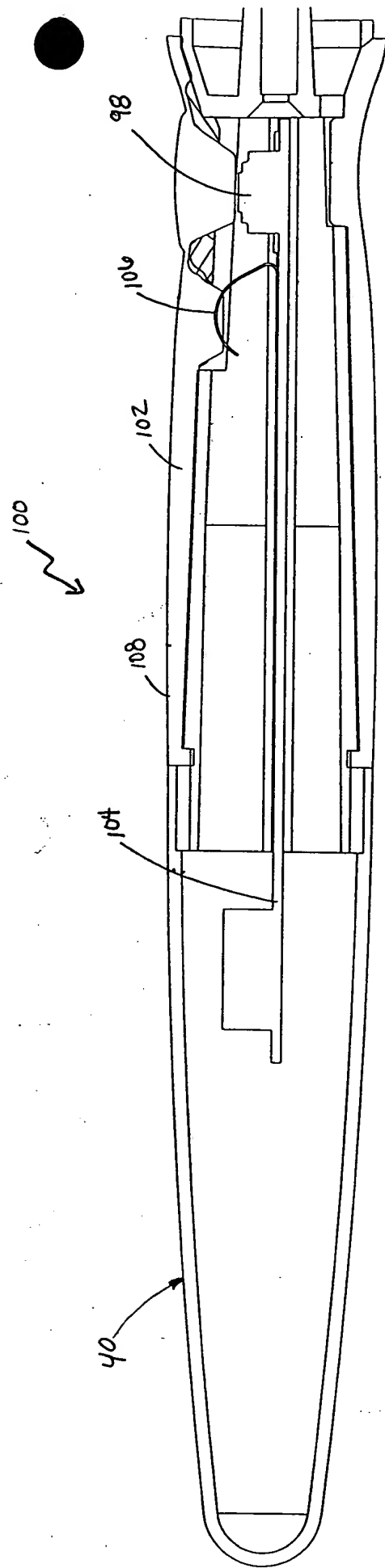


FIG. 6

FIG. 7 is a schematic diagram of a circuit for a touch point sensor. The circuit includes an oscillator, a signal divider, a variable delay, a phase detector, a pushbutton, and debug LEDs. The oscillator (110) consists of a 10.0k/1x resistor (R1) and two 74ACT14SC inverters (U1B and U1C) connected in a feedback loop. A 0.1uF capacitor (C1) is connected to the output of U1C. The signal divider (112) consists of a 100pF capacitor (C2) and a 4.99k/1x resistor (R4) connected to the output of U1B. The variable delay (114) consists of a 4.99k/1x resistor (R2) and a 10.0k/1x resistor (R3) connected to the output of U1C. The phase detector (116) consists of a 74ACT14SC inverter (U1E) and a 74ACT14SC inverter (U1F) connected in a feedback loop. A 0.1uF capacitor (C3) is connected to the output of U1E. The pushbutton (118) consists of a 10.0k/1x resistor (R5) and a 74ACT14SC inverter (U1G) connected in a feedback loop. The debug LEDs (122) consist of two LEDs (D1 and D2) connected to the output of U1G. The circuit is powered by a 5V supply (VCC) and ground (GND).

104

110

112

114

116

118

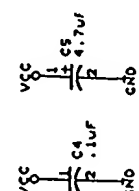
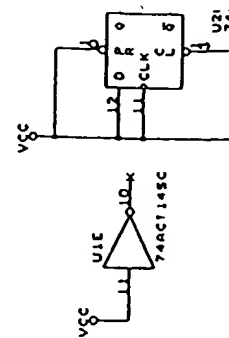
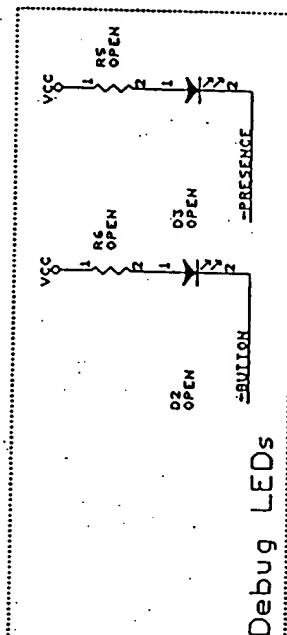
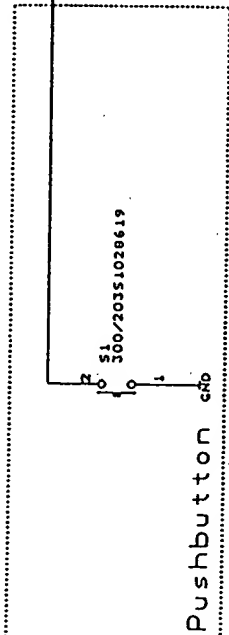
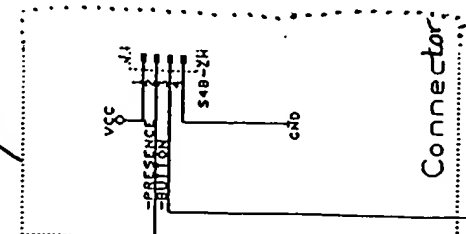
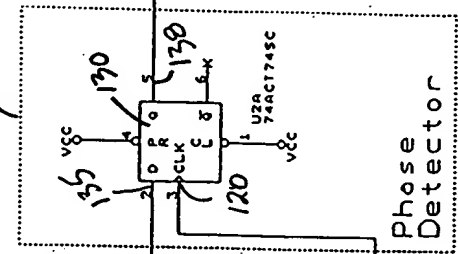
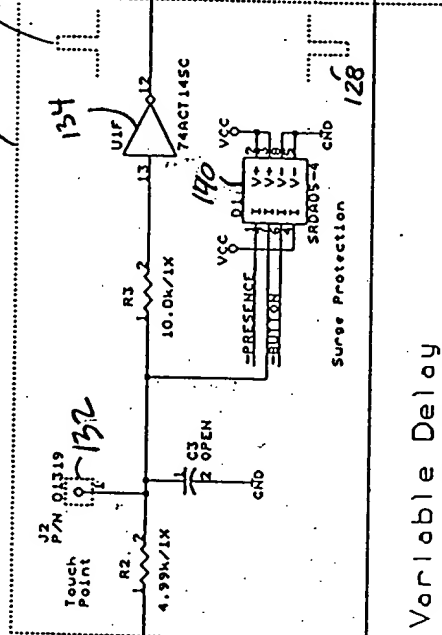
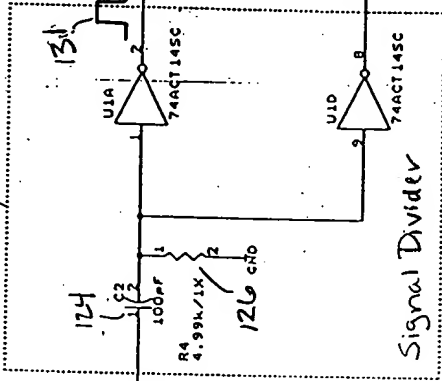
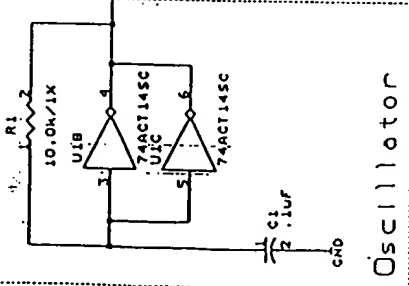


FIG. 7

